

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A ceramic filter comprising:
_____ a porous body having two end surfaces and an outer peripheral surface and having a plurality of main flow passages for a fluid to be purified which penetrate from one end surface to other end surface and which are partitioned from one another via partition walls; and

_____ filtration membranes provided on inner wall surfaces of the main flow passages;

wherein the fluid to be purified ~~that flows into the filter from opening portions in one end surface of the main flow passage being allowed to permeate and permeates~~ the filtration membranes and an inside of the porous body to be thereby purified, ~~the fluid being then taken out and is thereafter removed~~ as a purified fluid from the outer peripheral surface of the porous body; or

wherein the fluid to be purified ~~that flows into the filter from the outer peripheral surface of the porous body being allowed to permeate and permeates~~ the inside of the porous body and the filtration membranes to be thereby purified, ~~the fluid being then taken out and is thereafter removed~~ as a purified fluid from at least opening portions in one end surface of the main flow passage;

~~wherein cross-section~~ cross-sectional shapes of the plurality of main flow passages, in a direction perpendicular to a flow direction of the fluid to be purified or the purified fluid, are aligned in rows with a predetermined pattern;

~~a-wherein at least one specific partition wall part, among the partition walls, is positioned between the rows of predetermined main flow passages (to define at least one first specific main flow passages)-~~ passage disposed in the vicinity of each other, ~~the cross-section~~ cross-sectional shape of the ~~specific~~ at least one partition wall part, in

the direction perpendicular to the flow direction of the fluid to be purified or the purified fluid, is so formed as to be encompassed by a shape defined by two parallel lines apart at a specified distance from each other;

~~wherein the cross-section~~ cross-sectional shapes of the at least one first specific main flow ~~passages~~ passage, in the direction perpendicular to the flow direction of the fluid to be purified or the purified fluid, are formed into irregular polygonal shapes ~~equivalent or superior to heptagonal shapes having seven or more sides~~ arranged so that a predetermined sides (reference sides) facing each other ~~side of one faces a~~ predetermined reference side of another first main flow passage via the at least one specific partition wall part so that the predetermined reference sides constitute the two parallel lines; and

~~assuming that wherein~~ sides crossing opposite ends of the reference side are second and third sides, a side crossing an end of the second side opposite to the reference side is a fourth side, and a side crossing an end of the third side opposite to the reference side is a fifth side, θ_1 , θ_2 , θ_3 , and θ_4 (wherein the θ_1 , θ_2 , θ_3 , and θ_4 indicate an angle (θ_1) formed by the reference side and the second side, an angle (θ_2) formed by the reference side and the third side, an angle (θ_3) formed by the second and fourth sides, and an angle (θ_4) formed by the third and fifth sides, respectively) are within a range of ~~110-135~~ to 160° , and a length (A) of the reference side and a maximum distance (B) between the fourth and fifth sides satisfy a requirement of $0.3B \leq A \leq 0.7B$.

2. (Currently Amended) The ceramic filter according to claim 1 ~~which are provided with~~ comprising two or more sets of parallel lines; ~~each set comprising two parallel lines~~ said specific partition wall parts.

3. (Currently Amended) The ceramic filter according to claim 1, wherein the ~~cross-section~~ cross-sectional shape of the porous body, in the direction perpendicular to

the flow direction of the fluid to be purified or the purified fluid, has a maximum diameter of 70 mm ϕ or more.

4. (Currently Amended) The ceramic filter according to claim 1, wherein the at least one specific partition wall part is provided with rows of predetermined main flow passages (second specific main flow passages) whose opposite end-surface openings are plugged, and slit-like auxiliary flow passages are formed in portions including the outer peripheral surface of the porous body so that the second specific main flow passages communicate with an external space;

wherein the fluid to be purified that flows into the filter from the opening portions in the one end surface of the main flow passage is allowed to permeate and permeates the filtration membranes and the inside of the porous body to be thereby purified, and the fluid is taken out removed as the purified fluid from the outer peripheral surface of the porous body and outlets of the auxiliary flow passages, or

the fluid to be purified that flows into the filter from the outer peripheral surface of the porous body and the outlets of the auxiliary flow passages is allowed to permeate and permeates the inside of the porous body and the filtration membranes to be thereby purified, and the fluid is taken out thereafter removed as the purified fluid from at least the opening portions in the one end surface of the main flow passage.

5. (Currently Amended) The ceramic filter according to claim 4, wherein an arrangement pattern of ~~cross-section~~ cross-sectional shapes of the rows of second ~~specific-main~~ flow passages and rows of main flow passages other than the second ~~specific-main~~ flow passages, in the direction perpendicular to the flow direction of the fluid to be purified or the purified fluid, is a repeated pattern including two to eight rows of main flow passages other than the second specific main flow passages, which are arranged subsequently to one row of second specific main flow passages.